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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/075,917	02/13/2002	Kenneth Elmon Koch III	46872.269148 (UNCC 2001-0)	1717
44231	7590	11/13/2006	EXAMINER	
KILPATRICK STOCKTON LLP - 46872			PAN, DANIEL H	
J. STEVEN GARDNER			ART UNIT	PAPER NUMBER
1001 WEST FOURTH STREET				
WINSTON-SALEM, NC 27101			2183	

DATE MAILED: 11/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/075,917	KOCH, KENNETH ELMON
Examiner	Art Unit	
Daniel Pan	2183	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 29 August 2006.
- 2a) This action is FINAL.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1,3,-7,9-27 is/are pending in the application.
  - 4a) Of the above claim(s) 2,8 and 28-45 is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1,3,-7,9-27 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 13 February 2002 is/are: a) accepted or b) objected to by the Examiner.
 

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) Notice of Informal Patent Application
- 6) Other: \_\_\_\_\_

1. Claims 1,3,-7,9-27 remain for examination. Claims 2,8, 28-45 have been canceled.
2. Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saldanha et al. (5,682,519) in view of Serlet (4,792,909).
3. As to the newly amended a plurality of registers includes the instruction register, address register, the examiner holds that since no specific structure of the instruction register, address register and the end of OR register has been reflected into the claim, it is directed to well-known circuit element in general in the art, and therefore, one of ordinary skill in the art should be able to recognize that instruction and address registers should have been applicable in Saldanha's system because it was run on Sun Unix operating system , and the low power synthesis module (see algorithm used for low power short circuit in col.5, lines 60-67, col.6, lines 1-14) was part of Sequential Interactive System software (see col.5, lines 45-52).
4. As to the end of OR register, no specific detail of the end of OR ahs been recited in the claim. Therefore, it is read as general OR register . Saldanha disclosed the OR register (see conjunctive result in OR end register in fig.5 [OR]).
5. Claims 22-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saldanha et al. (5,682,519) in view of Serlet (4,792,909) as applied to claim 1, 21 above, and further in view of Gupta (6,385,757) .

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6. The rejections are maintained and incorporated by reference the last Office action on 01/17/06.
7. The response filed on 08/29/06 has been fully considered but is not persuasive.
8. In the remarks, applicant argued that :
  - a) Saldanha's circuit is not on static circuit with a static data path;
  - b) no dynamic performance of the short-circuit evaluation of Conjugative Normal Form Boolean expression/operations in Saldanha;
  - c) Saldanha's circuit still must evaluate all input to the circuit.
9. As to a) above, Saldanha did not specifically show that his Boolean circuit was static as claimed. However, Serlet taught a system for generating a static Boolean circuit (see col.2, lines 38-42, see also col.5, lines 20-68, col.6, lines 1132 for the details of the combinational logic of the CMOS circuit ). It would have been obvious to one of ordinary skill in the art to use Serlet in Saldanha for including the Boolean static circuit as claimed because the use of Serlet could provide Saldanha the ability to replace the circuit elements with alternative logic gates, such as a static circuit, and therefore increasing the ability to adaptability of the system, and because Saldanha also taught a CMOS combinational logic circuit in the background art, which provided the background teaching of Saldanha, and was a suggestion of the applicability of the Boolean static circuit, such as CMOS, into Saldanha in order to enhance the adaptability of Saldanha, and it could be readily achieved by predefining with modified control the static logic circuit of Serlet into Saldanha's configuration file parameters, such as the R/W port and

the circuit type, so that specific Boolean static gates of Serlet could be recognized by Saldanha, and in doing so, provided a motivating.

10. As to b) above, Saldanha also taught that his system was run on Sun Unix operating system , and the low power synthesis module (see algorithm used for low power short circuit in col.5, lines 60-67, col.6, lines 1-14) was part of Sequential Interactive System software (see col.5, lines 45-52). Form the above , it can be seen easily that Saldanha's shod circuit evaluation ( for purpose of low power) was based on interactive software, and an interactive software , as already known in the art, was able to respond whenever the user's request occurred, and therefore, it was dynamic. Saldanha did not explicitly characterize his system as "dynamic", but due to the interactive nature of the software, it was dynamic.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dan Pan whose telephone number is 571 272 4172. The examiner can normally be reached on M-F from 8:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chan, can be reached on 571 272 4162. The fax phone number for the organization where this application or proceeding is assigned is 703 306 5404.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

## **21 Century Strategic Plan**

*DANIEL H. PAN*  
PRIMARY EXAMINER  
GROUP